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U. S. DEPARTMENT OF AGRICULTURE,  
BUREAU OF ENTOMOLOGY.

NEWS-LETTER  
OF  
THE  
OFFICE OF CEREAL AND FORAGE INSECT  
INVESTIGATIONS.

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July 1, 1913.

As stated in the first, or April number of the News-Letter, its object is to bring the continually increasing number of people engaged in agricultural and forestry investigations into closer touch with one another and to keep the individual informed, in a general way, of work being done by the combined force. Thus the main purpose and aim of the News-Letter is to supply information to the division, for it is upon this that the division is carrying out so many diverse investigations and investigations.

In the beginning applied entomology consisted merely in the treatment of garden plants with soap, ashes, lime, or perhaps white hellebore, affording relief only to the gardener. The spread of the Colorado potato beetle eastward from the West probably did much to spread the use of the application of Paris green to the potato vine, but still its use was confined largely to the garden and the grower of grains and fruits found no relief whatever. Until the introduction of the cotton weevil of the South brought about the application and application of kerosene to the cotton plant, the grower of grains and grasses found no relief whatever. The spraying of trees and shrubs, which has now become an almost new era for the fruit grower, which has the ordinary farmer with his problems of insects and diseases, and his problems.

Before the advent of agricultural stations and even for some time afterwards, the farmer turned to the members of university faculties completely ignorant of the troubles of insects and asking relief brought the farmer no little consolation. The replies he received on the other hand for relief were usually couched in terms to which he was unused and much of the text of these replies in a language which he did not understand. Moreover, the replies were usually penned by men who had little or no practical knowledge of agriculture, and thus there grew up between the two not only a continually widening breach but in many cases an absolutely intolerant feeling on the part of each for the other.

Perhaps nothing better illustrates the changed condition and rapid growth of agriculture as a science than the immense strides made by economic entomology as applied over and throughout the broad acres of the ordinary farmer. At the present time, instead of receiving a stereotyped reply to his applications for relief, when he applies as an individual, or for his neighborhood, to the Department of Agriculture, either directly, or, as is becoming every day more and more frequent, through his Representative in Congress, he is very often surprised when, within two or three days after the receipt of his complaint, there appears in his neighbor-



hood a young man who, in most cases, has grown up a farmer's son on the farm, and, besides this, has had a thorough university training, and, perhaps, is further equipped by having been engaged in the investigation of insects over a wide range of country, including perhaps no small number of the United States. Instead of receiving a letter which to him might, perhaps, so far as practical aid is concerned, have been written in a foreign language, he finds that his visitor can go about over his and his neighbors' farms with him and gain a clear understanding of the crops cultivated can point out the work of insects and tell them in what manner they might have averted their injuries and saved their money. He will tell him of things that, though he may have spent a life time in farming, neither the farmer nor his neighbors have ever yet been able to observe. His caller not only fits into their farm life and speaks to him in the language of the farmer, but is able to explain, in a perfectly natural and intelligible way, much of what to him has heretofore been a mystery. The young man points out to him wherein their farm methods have, in many cases, been primarily responsible for their previously sustained losses by insect attack. It does not greatly matter whether State or city he is resident, if his locality is not too inaccessible and the matter is of more than local importance any of the men located at the Federal different field stations can be wired instructions that will send them to his relief. In this way entomology as applied to the broad acres of the farm has within the last twenty-five years become completely revolutionized. This means much to the growers of grains and forage crops and to the stock breeder. Moreover, it means almost equally as much to the banker, the manufacturer, and the merchant, all of whom are coming to recognize the fact.

On July 1, 1904, the writer was the sole member of the section, Messrs. Geo. I. Reeves and W. J. Phillips being appointed a few months later, and the expenditures for the fiscal year 1904-1905 were some \$6,000.

#### FISCAL YEAR 1913-1914.

#### PERSONNEL OF THE STAFF OF GENERAL AND FORAGE INSECT INVESTIGATIONS.

F. M. Webster (Ill.), in charge.

#### OFFICE.

W. R. Walton (Pa.),  
Margaret Marshall (Va.),

Hattie M. Wilson (Illn.),  
Thos. P. Mahan (Mass.).

#### TECHNO-BIOLOGICAL.

A. B. Gahan (Md.),  
J. M. Aldrich (S. Dak.).

J. T. Monell (Mo.).





LAFAYETTE, INDIANA, FIELD STATION.

W. J. Phillips (Va.), in charge.

J. J. Davis (Ill.),

Henry Fox (Pa.),

A. F. Satterthwait (Pa.).

WELLINGTON, KANSAS, FIELD STATION.

E. O. G. Kelly (Ky.), in charge.

Harrison E. Smith (Mass.),

W. A. Harrington (Md.).

Joseph S. Wade (Kans.).

CHARLESTON, MISSOURI, SUB-STATION.

Vernon King (Canada).

BRIDGEVILLE, TEXAS, FIELD STATION.

R. A. Miskary (Tenn.), in charge.

Claud L. Scott (Ohio),

E. J. Maxwell (Iowa).

MAKAVILLE, TENN., FIELD STATION.

C. E. Miskary (Tenn.), in charge.

W. H. Larrimer (Ohio).

TIERRA, ARIZ., FIELD STATION.

R. H. Wilson (Colo.), in charge.

T. Scott Wilson (Tenn.),

E. H. Weston (Ariz.).

SALT LAKE CITY, UTAH, FIELD STATION.

Geo. E. Polyes (Ill.), in charge.

C. W. Creel (Nev.),

E. R. Hopkins (Kans.).

Philip B. Miles (Colo.),

C. E. Jones (Utah),

Thomas R. Chamberlain (Utah),

Leslie Anderson (Utah),

R. J. Kewley (Utah),

Marble Dyer (Utah), stenographer.

SALT LAKE CITY, UTAH, SUB-STATION.

F. H. Timberlake (W. H.), in charge.

L. P. Rockwood (Conn.),

W. R. Thompson (Canada).  
(in Europe.)



HAGERSTOWN, MD., FIELD STATION.  
J. A. Hyslop (N. J.), in charge.

C. M. Packard (Mass.).

COLUMBIA, S. C., FIELD STATION.  
Philip Luginbill (Ohio), in charge.

GREENWOOD, MISS., FIELD STATION.  
W. R. McConnell (Pa.), in charge.

Edmond H. Gibson (Mich.).

ELK POINT, S. DAK., FIELD STATION.  
C. H. Ainslie (Minn.), in charge.

E. J. Bashe (Iowa).

GLENDALE, CAL., FIELD STATION.  
T. D. Urbahn (Colo.), in charge.

KCHIVER, N. MINN., FIELD STATION.  
V. M. Wildermuth (Ohio), in charge.

Donald J. Caffrey (Conn.),  
Guy E. Pitts (Ohio),  
W. F. Schlupp (Ohio),

J. R. Sandige (Ariz.),  
F. H. Bates (Colo.),  
Irving C. Crawford (S. Dak.).

#### COLLABORATORS.

Chas. J. Petty (Wis.),

W. E. Hall (Ohio).

Geo. G. Ainslie has returned from his investigations of the fall army worm in Florida to resume his duties at his field station, Nashville, Tenn.

Monsieur A. Vuillet, Preparateur a la Station Entomologique de Paris, has given a 13-page review of Bulletin 110, on Toxoptera graminum, in Bulletin de la Societe d'Entomologie et de Vulgarisation de la Biologie Agricole, under the title "Le Puceron des Cereales et ses Invasions aux Etats Unis."



H. M. Russell has been transferred from the cereal and forage insect investigations to truck crop investigations.

The range caterpillar investigations have been commenced under somewhat unusual circumstances. Rain occurred during twenty out of the first twenty-two days, washing out railway bridges and destroying telegraph and telephone lines. This, too, is an arid country.

P. H. Timberlake, charged with the management and work of developing and distributing introduced parasites of the alfalfa weevil, reports under date of June 13: "We have secured specimens of *Canidia* "A" from parasite in the field at Murray, showing that this species has successfully overwintered here in America. We obtained two *Canidia* from a comparatively few *Phytonomus* larvae, so that the *Canidia* has apparently got a good start at that point."

We have received from Mr. Kenneth Smith, director of the experiment station at St. Croix, Danish West Indies, specimens of the fulgorid *Megastropis* which, according to statement that the insect is doing a great deal of damage to maize in that locality during the present season. Mr. Smith states that he grew maize at the experiment station last year but did not notice the insects or their ravages. The species was determined by the late Doctor Ashmead in 1890 from Jacksonville, Fla., where he found it also damaging corn. Our own records do not show any further injury to corn in this country.

We have received from Mr. W. Moore, lecturer in entomology at the agricultural school at Pietermaritzburg, South Africa, specimens of what Mr. Menell has determined as *Aphis maidis*. Mr. Moore states that it is found upon sorghum, maize, and grasses such as *Panicum*. It appears in January and is abundant for the rest of the summer. It is also abundant in the Orange River Colony and Basutoland. He reports, with specimens, which were determined by Mr. Menell as *Aphis maidis*, stating that this species is found on *Ischnopus* and is abundant throughout the summer.

The same gentleman has sent us the following parasites, which have been determined by W. Gahan: That is probably *Aphidius phorodonis*, reared from the green peach aphid and also from *Toxoptera* and reared from the latter into the green peach aphid, and its offspring reared into the black peach aphid. The offspring of these were bred into the cabbage aphid, from which the species was again reared. The same parasite was also reared from *Aphis nerii*, from which it was bred into *Toxoptera*. Mr. Moore also reared *Dicaelotus rufus* from the cabbage aphid and from what he terms the green peach aphid on cabbage, and using unfertilized females bred it also through this same aphid into and from *Toxoptera*.

